

# Satellite system will track water usage

By **MATEUSZ PERKOWSKI**  
Capital Press

Irrigators and regulators frequently encounter the same predicament: They want to measure actual water but must instead deal with paper.

Estimates of large-scale water usage needed by regulators often depend on “paper water,” or government-issued permits that describe the amount legally available for withdrawal but don’t reflect real consumption.

Farmers face a similar dilemma with published studies about crop irrigation requirements that aren’t specific to their climate, potentially causing them to use more water than necessary or not enough to optimize yields.

Next year, a team of public and private scientists plans to release a tool that will alleviate the problem by estimating evapotranspiration — water released by plant foliage and soil evaporation — from satellite images of the Western landscape.

“It’s going to change the game for water managers,” said Rep. Mark Owens, R-Crane, during the Oregon House Water Committee’s Dec. 17 hearing.

The OpenET technology platform, developed by NASA, Google and several nonprofit groups, estimates water consumption based on the cooling effect of evapotranspiration, which is measured with satellite data about light reflection and surface temperature.

Farmers can use the system to see how much water is consumed in particular fields over time, giving them a more precise understanding of irrigation needs, said Owens, who also grows about 3,000 acres of alfalfa in



Mateusz Perkowski/Capital Press File

**A new satellite-based technology system will help irrigators and regulators measure water usage across 17 Western states.**

Oregon’s Harney County.

“How can we raise a crop with the least amount of water?” he said. “I can design irrigation systems to meet the needs of the crop.”

For example, center pivots historically applied more than 7 gallons of water a minute per acre of alfalfa based on the crop’s maximum irrigation needs during the hottest days of summer, he said. That’s likely an excessive rate but was commonly used to avoid drought stress.

If alfalfa growers can reliably estimate the crop’s evapotranspiration rate during various temperature and weather conditions, however, they can conserve water without sacrificing yields, Owens said.

“I can make the determination to shut the pivot off for one or two or three days in the spring, knowing that my crop isn’t getting stressed,” he said.

Water regulators can also use OpenET to compensate for the lack of information they have about water usage in basins suffering from declining aquifers or insufficient surface

flows. In Oregon, for example, only about 16% of the total water rights in the state must measure and report water usage.

“This data gap can be bridged with OpenET technology,” said Ivan Gall, field services division administrator for the Oregon Water Resources Department.

From the regulatory standpoint, evapotranspiration data can help OWRD detect potentially unauthorized water usage by comparing the satellite imagery with its map of legal water rights, he said.

Groundwater studies, which measure possible over-utilization on a vast scale, traditionally relied on assumptions about water usage that can now be quantified much more accurately with satellite data, said Jordan Beamer, a hydrologist with OWRD.

Since the satellite images go back to the 1980s, the agency can also use OpenET to analyze how irrigation patterns have changed over time, Beamer said.

“We want to expand the use of this technology and integrate it into our processes,” he said. “We see this as a useful tool for basin-scale planning.”

The scientists who’ve developed OpenET expect to form a non-profit group to oversee the technology and make it widely available free of charge to small- and medium-sized water users, said Forrest Melton, senior research scientist with NASA.

Farmers will be able to find water consumption information from an aerial field map of 17 Western states online or they may integrate the data into their existing irrigation management tools, he said. “Everyone will have access to the same information.”



Carol Ryan Dumas/Capital Press File

**Calves hit the feed bunk at Intermountain Beef Producers’ feedlot in Eden, Idaho. The cost of feed will be significantly higher next year, an economist says.**

# Higher feed costs to test producers

By **CAROL RYAN DUMAS**  
Capital Press

U.S. livestock and poultry producers will face surging feed costs in 2021, and there are more questions than answers when it comes to animal protein demand.

CoBank analysts expect an average increase of 12% in U.S. feed costs due to higher corn and soybean meal prices.

“They’re both driving that story,” said Will Sawyer, lead animal protein economist with CoBank’s Knowledge Exchange division.

With corn futures above \$4 per bushel and soybean meal futures around \$350 a ton, producers face higher prices than they have in many years, he said.

Feed costs have been relatively benign since 2012 and lower than the previous year for six of the last eight years. But supply and demand are driving an increase now, with a lot of similarities to what drove increases in 2007 and 2011, he said.

China is rebuilding its swine herd, the largest in the world. The country is the top importer of soybeans, and is expected to import three times the normal amount of corn this year, he said.

“More pigs need more feed, and that’s driving more corn and soybean imports into China,” he said.

On the supply side, La Nina in South America is expected to create drier conditions in key regions of Brazil and Argentina — both major exporters of corn and soybeans to China, he said.

And drought conditions in the U.S. are complicating things, with cattle producers and feeders in a difficult

environment, he said. All that adds another \$1 a bushel to corn prices, he said.

Feed costs vary by species for several reasons, such as life cycle, feed ration and components of other feed costs, he said.

In 2021, CoBank expects U.S. hog producers to face the highest average increase of 14%, followed by cattle feeders at 13% and chicken producers at 11%. The impact will be the highest next summer when the average feed cost in the sectors climbs 18% in the second quarter and 16% in the third quarter.

It’s a significantly higher level of inflation than seen in the last decade, he said.

Chicken feeders are already experiencing feed cost inflation with a 4.4% increase in the fourth quarter over a year ago. The increase will begin to be felt by the cattle and hog sectors in the first quarter of 2021, he said.

This time next year, the chicken sector will be in a deflationary environment. But the red meat side will still be in an inflationary environment, he said.

“Fortunately there are positive signs that producers and processors may benefit from higher beef, pork and poultry prices to cushion feed costs,” he said.

Total meat and poultry production is forecast to grow only 0.8% year over year. COVID-19 vaccine distribution will ramp up, meat plant operations are more secure and plant costs will be lower than they were last spring, he said.

“Hopefully, 2021 will be better than what has been a stressful 2020,” he said.

# New spending bill has provisions for water projects

Congress passes water spending bills; next stop is president

By **SIERRA DAWN McCLAIN**  
Capital Press

WASHINGTON, D.C. — Congress this week passed a \$1.4 trillion spending package to fund the government through next September and \$900 billion in COVID-19 relief.

As part of the package, Congress also passed a multi-billion-dollar bill funding Western U.S. water projects called the Water Resources Development Act of 2020, or WRDA.

“Hats off to Senate and House leaders, water committees and committee staff to put this bipartisan water package together. Overall — this is a very nice, early Christmas present to Western water users,” Dan Keppen, executive director of Family Farm Alliance, a group that advocates for irrigation and water supplies for Western farmers, said in a statement.

The bills have broad bipartisan support, and President Donald Trump is expected to sign them into law by the end of the week, according to the alliance.

The bills would support the follow-

ing water projects with dollar amounts requested earlier this year by the Interior Department:

- **Boise River Basin — Anderson Ranch Dam Raise Project (Idaho):** This project would raise the Anderson Ranch Dam northeast of Mountain Home, Idaho, increasing the capacity of the reservoir.

- **Friant-Kern Canal Capacity Correction Project (California):** This project would repair 33 miles of the 153-mile-long Friant Kern Canal, which has lost more than 50% of its design capacity due to land subsidence.

- **Sites Reservoir Project (California):** This project would pump winter flood flow from the Sacramento River through existing canals to an artificial lake to provide water security during droughts.

- **Los Vaqueros Reservoir Expansion Project (California):** The project would enlarge a reservoir in southeastern Contra Costa County.

- **Cle Elum Pool Raise (Washington):** This project’s purpose is to increase water storage capacity in the Yakima Basin’s Cle Elum Reservoir by

up to 14,600 acre-feet.

- **Delta Mendota Canal Subsidence Correction Project (California):** This project would repair cracks in the Delta-Mendota Canal caused by subsidence.

- **Del Puerto Water District Project (California):** To combat drought, a new reservoir would be constructed in Del Puerto Canyon in the Coast Range foothills. The project would deliver water from the Delta-Mendota Canal into the new reservoir.

- **San Luis Low Point Improvement Project (California):** This project’s intent is to store alternative water supplies to address reliability issues in San Luis Reservoir when it reaches its low point, fostering algae growth.

- **Sacramento Regional Water Bank (California):** This is a developing groundwater storage program intended to improve the water supply in the Sacramento region.

The bills also include funding for water-related grants, provisions for creating an aging infrastructure account, an aquifer recharge flexibility program, an observatory designed to collect data on snowmelt and various technologies.

# U.S. Wheat Associates officers extend terms for another year

By **MATTHEW WEAVER**  
Capital Press

Citing the COVID-19 pandemic, U.S. Wheat Associates officers have extended their terms for another year.

“Everything pretty well shut down in January, so we’re not traveling, we’re not seeing the trade teams, we’re not doing all that,” chairman Darren Padget told the Capital Press. “Which, typically, we’re pretty involved with.”

During a normal year, the officers would be traveling overseas to interact with customers at this time of year, Padget, a farmer in Grass Valley, Ore., said.

Instead, they have been relying on virtual meetings.

“It would be nice to have a more normal term and see those folks that we’ve built a relationship with over the years,” he said.

During its Nov. 4, meeting, the U.S. Wheat board of directors voted unanimously to temporarily change the organization’s bylaws to allow 2020/21 officers to serve for two years, according to U.S. Wheat.

The decision to consider the change came from U.S. Wheat farmer directors because the COVID-19 pandemic had severely restricted the normal, expected activ-



U.S. Wheat Associates

**Darren Padget at his Grass Valley, Ore., farm in 2019. Padget began his term as chairman of U.S. Wheat Associates in July 2020.**

ities of the officers, including Padget, vice chair Rhonda Larson of East Grand Forks,

Minn., secretary-treasurer Michael Peters of Okarche, Okla., and past chairman

Doug Goyings of Paulding, Ohio.

According to U.S. Wheat, Gary Millershaski, a wheat farmer from Lakin, Kan., and a U.S. Wheat director, made the motion, saying that the officers could not fill the personal ambassador role with wheat importing customers inherent in their terms.

Millershaski said extending the officer terms would help “make the organization stronger as the officers progress through their positions before reaching the chair.” An extension “gives them more time to listen and learn how to best represent their fellow farmers.”

The officers will now serve in their current positions through June 30, 2022, the end of U.S. Wheat’s 2021-22 fiscal year. After that, the motion states that the bylaws will revert to one-year officer terms.

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Notice is hereby given that the following vehicle will be sold, for cash to the highest bidder, on 01/04/2021. The sale will be held at 10:00am by  
COPART OF WASHINGTON INC  
2885 NATIONAL WAY  
WOODBURN, OR  
2019 INFINITY QX60 LL  
VIN = 5N1DL0MM9K557797  
Amount due on lien \$1,835.00  
Reputed owner(s)  
MICAHA P CASTANEDA  
ONPOINT COMMUNITY CU

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COPART OF WASHINGTON INC  
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2008 FORD MUSTANG 2DR  
VIN = 1ZVHT82H985139650  
Amount due on lien \$1,835.00  
Reputed owner(s)  
AMES KENNETH WILLIAMS JR  
RELIABLE CREDIT ASSOC INC

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COPART OF WASHINGTON INC  
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2012 TOYOTA CAMRY 4DR  
VIN = 4T1BK1FK3CU007468  
Amount due on lien \$1,835.00  
Reputed owner(s)  
RUSSELL W & LISA K STRICKLAND

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COPART OF WASHINGTON INC  
2885 NATIONAL WAY  
WOODBURN, OR  
2010 TOYOTA COROLLA 4DR  
VIN = 2T1KU4EEXAC248031  
Amount due on lien \$1,835.00  
Reputed owner(s)  
ANGIE VASQUEZ & MICHAEL ROSENBERG  
CARMAX AUTO FINANCE

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2011 TOYOTA RAV4 UT  
VIN = JTMFB4DV5B5049088  
Amount due on lien \$1,955.00  
Reputed owner(s)  
CONNOR B HULL  
WELLS FARGO AUTO

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COPART OF WASHINGTON INC  
2885 NATIONAL WAY  
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2019 TOYOTA COROLLA 4DR  
VIN = 2T1BURHE7K176411  
Amount due on lien \$1,835.00  
Reputed owner(s)  
MALAAK ANIN DAMRA  
TOYOTA MOTOR CREDIT CORP

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COPART OF WASHINGTON INC  
2885 NATIONAL WAY  
WOODBURN, OR  
2014 CHEV SILVERADO PU  
VIN = 1GCRPEC3E2202571  
Amount due on lien \$1,835.00  
Reputed owner(s)  
BRYAN LEOPOLD BUSTOS  
SIERRA AUTO LLC DA2003

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2885 NATIONAL WAY  
WOODBURN, OR  
2018 SUBARU WRX 4DR  
VIN = JF1VAT1A62J9810115  
Amount due on lien \$1,835.00  
Reputed owner(s)  
ABRAHAM ENRIQUE ANDRADE  
GM FINANCIAL

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COPART OF WASHINGTON INC  
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WOODBURN, OR  
2019 HARLEY FLHRXS MC  
VIN = 1HD1KV14K627400  
Amount due on lien \$1,835.00  
Reputed owner(s)  
RYAN KEITH RICHARDSON

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COPART OF WASHINGTON INC  
2885 NATIONAL WAY  
WOODBURN, OR  
2015 LEXUS NX200 UT  
VIN = JTJBARBZ4F2031784  
Amount due on lien \$1,835.00  
Reputed owner(s)  
TANYA MABEL VIRULA  
ONPOINT COMMUNITY CU

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COPART OF WASHINGTON INC  
2885 NATIONAL WAY  
WOODBURN, OR  
2013 VW PASSAT 4DR  
VIN = 1VWCM7A30DC122214  
Amount due on lien \$1,835.00  
Reputed owner(s)  
CASEY JAMES McKEEVER  
OREGON COMMUNITY CU

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COPART OF WASHINGTON INC  
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WOODBURN, OR  
2014 MAZDA 6 4DR  
VIN = JM1GJ1W65E1143265  
Amount due on lien \$1,835.00  
Reputed owner(s)  
ELIZABETH J & JASON S ELLISON  
CAPITAL ONE FSF